8. Rea TH, Ridley DS: Lucio's phenomenon: A comparative histologic study. Int J Lepr 1979; 47:161-166

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Dr Gelber Responds

TO THE EDITOR: I am gratified that my Medical Grand Rounds stimulated further insights. Because the interest has been focused on the differences between the therapy I and other US clinicians[1-3] use for multibacillary leprosy and that recommended by the World Health Organization (WHO),[4] further comments on this complex therapeutic decision appear to be in order. I recommend for my adult patients in the United States daily dapsone, 100 mg, and daily rifampin for three years, followed by daily dapsone, 100 mg, indefinitely. The WHO advocates daily dapsone, 100 mg, plus daily clofazimine, 50 mg, as well as monthly supervised rifampin, 600 mg, plus clofazimine, 300 mg. The WHO recommends that this treatment be administered for at least two years or until smears become negative (generally four to six years).

We do not generally recommend the use of clofazimine as part of our multidrug regimen for multibacillary leprosy. The inclusion of clofazimine in the WHO regimen was largely dictated by a concern with the high prevalence of primary dapsone resistance and the need for a reliable companion antimicrobial drug to be used in combination with rifampin. Because in a large series of multibacillary untreated patients[5] we did not detect any clinically relevant primary dapsone resistance in the United States, we find dapsone to be an acceptable companion to rifampin; clofazimine is therefore unnecessary. Furthermore, the skin discoloration resulting from clofazimine is cosmetically unacceptable to many of our lighter-skinned, particularly Asian, patients, marking them as "lepers."

Because *Mycobacterium leprae* cannot be grown in vitro and our rodent systems are sufficiently insensitive to monitor either directly or from human biopsies the relative killing of *M leprae* by daily versus monthly rifampin treatment, the preferred tempo of rifampin administration has been impossible to assess. Nonetheless, common sense would dictate that the killing of *M leprae* by daily therapy would at least be equivalent, and likely superior, to monthly administration. The WHO's decision to advocate monthly rifampin therapy is certainly based on its extraordinary bactericidal activity for *M leprae* and the prohibitive cost of daily rifampin for many developing countries where leprosy is a major public health problem. These financial considerations are not applicable to the developed world.

There is little doubt that noncompliance and low-dose therapy resulted in a high prevalence of secondary dapsone resistance in several locales,[6-8] and indeed suboptimal therapy in vitro is the classical means of isolating antimicrobial-resistant mutants. Thus, I would disagree with the assertion of Dr Vasireddi that daily rifampin therapy would be more dangerous than monthly rifampin in resulting in rifampin-resistant relapse. We have had considerable experience giving rifampin daily for the three years' duration we advocate without any additional toxicity than that encountered in the first few months. Most of the serious, life-threatening toxic effects of rifampin—thrombocytopenia, renal failure, and severe hemolytic anemia—are the result of intermittent therapy, in this respect once a month being fortunately implicated less than once a week. In a recent editorial review, Pattyn analyzed several different frequencies of rifampin administration used for multibacillary leprosy and found that equivalent amounts of rifampin given daily result in a lower relapse rate than intermittent administration, generally twice a week.[9]

Last is the issue of the relative efficacy of lifelong versus finite therapy for multibacillary leprosy. There has been an enormous experience with lifelong, mostly dapsone monotherapy, since the 1940s. Unless dapsone resistance developed, which it did only 2.5%[6] to 10%[10] of the time with dapsone monotherapy, the disease remained regularly arrested. Certainly the addition of rifampin daily for three years would reduce the *M leprae* population to a level where the presence of any viable dapsone-resistant *M leprae* would be exceedingly unlikely. Although our US experience is unpublished, personally I have treated more than 150 patients since 1979 in the manner outlined and have found in compliant patients absolutely no relapses. Although WHO multidrug therapy has cleared many patients from the leprosy rolls, it is not clear that long-term relapse rates will ultimately prove acceptably low. The evaluation of this issue is compounded by the fact that unlike short-course multidrug therapy for pulmonary tuberculosis, where relapses occur generally within six months after the completion of therapy, in multibacillary-leprosy patients treated with rifampin-containing regimens relapses largely occur only after five or more years.[9,11] For WHO's multidrug therapy for multibacillary leprosy, there is little experience with follow-up evaluation of this duration. Most recently, however, two-year multidrug therapy for multibacillary leprosy in one locale was found associated with a 10% relapse rate by five years,[9] which has been recently revised with additional follow-up to 20%. If this is to be the general experience with the WHO regimen, our recommendations for more prolonged therapy seem well justified.

Conflicting regimens can be confusing. Unfortunately, the data currently available leave room for valid alternative opinions, even among experts. Controlling leprosy in the developing world and treating patients in the United States may with reason be different. In the United States we may not be as severely constrained by finances. The important thing is not which formula is chosen but maintaining long-term compliance, drug supplies, and careful follow-up. Currently, less than half of the world's Hansen's disease patients receive any therapy at all. Of those, less than half receive anything other than dapsone alone. Whatever the regimen selected, the therapy for multibacillary leprosy requires multidrug regimens for a considerable time and a long follow-up.

ROBERT H. GELBER, MD
2211 Post St, Ste 301
San Francisco, CA 94115

REFERENCES

1. Gelber RH: Leprosy (Hansen's disease), *In* Rakel RE (Ed): Conn's Current Therapy. Philadelphia, Pa, WB Saunders, 1992, pp 76-80
2. Gelber RH: Leprosy (Hansen's disease), *In* Berkow R (Ed): The Merck Manual, 16th edition. Rahway, NJ, Merck Research Laboratories, 1992, pp 146-150
3. Gelber RH: Leprosy (Hansen's disease), *In* Mandell GL, Bennett JE, Dolin R (Eds): Principles and Practice of Infectious Diseases, 4th edition. New York, NY, Churchill Livingstone, 1994 (in press)
4. WHO Study Group: Chemotherapy of leprosy for control programmes. World Health Organ Tech Rep Ser 675, 1982
5. Gelber RH, Rea TH, Murray LP, Siu P, Tsang M, Byrd SR: Primary dapsone-resistant Hansen's disease in California—Experience with over 100 *Mycobacterium leprae* isolates. Arch Dermatol 1990; 126:1584-1586
6. Meade TW, Pearson JMH, Rees RJW, North WRS: The epidemiology of sulfone resistant leprosy. Int J Lepr 1973; 41:684
7. Gelber RH: U.S.-Japan Cooperative Medical Science Program: Workshop on leprosy chemotherapy. Int J Lepr 1976; 44:369-373
8. Jacobson RR: Sulphone-resistant leprosy: Etiology, incidence and treatment in the United States. Int J Lepr 1973; 41:684
9. Pattyn SF: Search for effective short-course regimens for the treatment of leprosy. Int J Lepr 1993; 61:76-81
10. Pearson JMH, Rees RJW, Waters MFR: Sulphone resistance in leprosy; A review of 100 proven clinical cases. Lancet 1975; 2:69-72
11. Grosset JH, Guelpa-Lauras CC, Bobin P, et al: Study of 39 documented relapses of multibacillary leprosy after treatment with rifampin. Int J Lepr 1989; 57:607-614

Specialty Care Needs of a Medically Indigent Adult Population

To the Editor: Proposed changes in the national health care system include health coverage for persons currently considered "medically indigent." This group includes the 37 million Americans completely uninsured and those currently covered by state and local government-funded programs such as the medically indigent adult county medical services (CMS) programs in California.[1] Although it is clear that a strong primary care network will need to be in place, the specialty care needs of these people will be substantial.[2]

San Diego County provides physical health services to approximately 22,000 medically indigent adults 21 to 65 years old. We recently reviewed the specialty care needs of these patients and compared them with the specialists available. In fiscal year 1992, 9,202 referrals were made to 328 specialists. The burden of specialty care fell to the greatest extent on ophthalmology (22% of referrals) and orthopedics (11%). General surgery (10%) and otolaryngology (8%) were also in high demand, followed by cardiology (8%), urology (7%), and neurology (7%).

The CMS program in San Diego experiences varying participation among specialties, with only 17% of county specialists accepting CMS patients. This maldistribution results in large referral-to-physician ratios (greater than 50 referrals per physician) falling on the dermatologists, endocrinologists, neurologists, and otolaryngologists. Uneven physician participation results in administrative resources being used to find physicians to care for these patients. The proposed reforms, however, would pay physicians equally for the formerly indigent and formerly insured patients. Assuming equal participation of physicians across specialties and current utilization patterns, the referral-to-physician ratio would be realigned. These recalculated ratios are highest in the fields of gastroenterology, neurology, ophthalmology, and otolaryngology; although orthopedics, surgery, cardiology, and urology would also be in high demand, the large number of these specialists countywide would result in much lower patient-physician ratios.

Eliminating economic barriers will not result in equal access to all specialists, because of geographic, language, and cultural barriers. It is, however, refreshing to consider that true health care reform could change the attitudes towards previously medically indigent adults from a burden and duty to a sought-after patient base, eliminating the time and money spent in seeking care for these patients.

LINDA L. HILL, MD, MPH
County Medical Services Program
Medicus Systems Corporation
PO Box 939016
San Diego, CA 92193

REFERENCES

1. Friedman E: The uninsured: From dilemma to crisis. JAMA 1991; 265:2491-2495
2. Wright RA: Community-oriented primary care: The cornerstone of health care reform. JAMA 1993; 269:2544-2547

Improving Response to Domestic Violence

To the Editor: On reading Dr Patricia Salber's highly relevant epitome, "Improving Emergency Department Response to Victims of Domestic Violence," in the November 1993 issue,[1] a particular need in the care of these patients comes to mind. Working as a forensic pathologist in a coroner's office within shouting distance of the regional level I trauma center, I review emergency department records of injured patients who die. The injury assessments in these records may be adequate for treatment, but they are usually substandard for medicolegal purposes. I assume that this is also the case for many injured patients who survive and are therefore never evaluated by a forensic specialist.

In my experience, the training of emergency physicians generally is inadequate to prepare them for the task of accurately assessing injuries using proper forensic terms. Many do not appreciate the difference between a laceration and a cut, for instance. Emergency physicians often have a more pressing matter on their minds—saving the injured patient's life—and can spare little time for detailed wound evaluation and documentation. Nevertheless, injured patients should be given proper medicolegal evaluation. Inaccurate wound description can compromise treatment and may destroy the patient's right to compensation. Patients' need for justice on the criminal or civil level is as valid as their need for competent medical and surgical therapy.

Despite these farther-reaching needs, few centers in the United States have begun clinical forensic medicine training programs for residents and fellows in emergency medicine and other clinical specialties.[2] We are still far behind countries such as Great Britain, where a police surgeon—a clinician with specific forensic training and certification—is available. As a result, our quality of medicolegal evidence in cases with surviving victims, including victims of domestic violence of all sorts, is compromised.